

SERIES PAZ

Polarizer - Analyzer - Attenuator

For many laser-based applications, polarization control is critical within an optical system. The Coherent Series PAZ are designed to filter polarization at an incredible 10,000:1 ratio. They are optimized using proprietary lens coatings and assembled in an ultra-clean environment. This makes them ideal for high-power laser irradiation.



FUNCTION

- Polarization of unpolarized beams
- Continuously variable attenuation of linear polarized beams
- Electro-optic modulation system
- Other polarization-sensitive systems

FEATURES

- High extinction ratio
- Modular and compact design
- Broadband operations (4 plate PAZ's) from 8 to 12 μm (single PAZ)
- Single wavelength from 4 to 14 μm (2-plate PAZ's)
- Water-cooled
- Power handling to 300 Watts

PROVIDING

- High continuous wave capability and high pulse damage threshold
- Visible transmission for ease of alignment
- Low insertion loss (>98% transmission)
- Minimum beam distortion/deviation

Series PAZ polarizer – analyzer – attenuators are specially tailored to the needs of the high-power continuous wave and pulsed-laser use. Their rugged construction and ease of use make them attractive for any polarization-sensitive infrared application where reliability, versatility, and accuracy are critical.

Modular and Compact Design

Coherent latest design is the most compact version, focused on reducing size and complexity. The rectangular cross-section facilitates easy identification of the plane of polarization of the transmitted beam lines as it is precisely parallel to the long dimension of the exterior housing. The unique modular construction allows quick repair by easily replacing damaged components, minimizing downtime and repair expense.

Brewster Windows Provide Beam Stability

Standard PAZ units employ either 2 or 4 Zinc Selenide (ZnSe) Brewster windows as polarization-sensitive elements. Brewster windows are used in transmission, so insertion loss in a collimated polarized beam is less than 3% per plate. Brewster plates eliminate laser damage concerns typically associated with certain coatings and wire grids. Transmissive Brewster plate polarizers also do not experience the energy loss that occurs with reflective Brewster plate polarizers. For an added benefit, using ZnSe allows for system alignment using a HeNe laser.

Brewster plate fabrication method minimizes the output beam’s angular deviation relative to the input beam. The assembly also ensures no lateral displacement of the output beam. These combined features provide a stationary beam regardless of the rotational position of the unit. This also provides protection from working with small area detectors or in applications where the transmitted beam position is critical. All standard units are post-mounted in a rotatable mount with a factory-set 360° angular readout dial.

Specifications	Series PAZ	
# of Brewster Plates	2	4
Transmission at 10.6 μm (%)	98	99
Extinction Ratio	10,000:1	500:1
Standard Apertures (mm)	10, 20, 25	
Wavelength Region (μm)	2 to 14	8 to 12